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JAPANESE PATENT OFFICE

PATENT ABSTRACTS OF JAPAN

(11) Publication number: 09279695 A

(43) Date of publication of application: 28.10.1997

(51) Int. Cl. E04B 1/58

E04B 1/20, E04B 1/98, E04G 23/02, E04H 9/02

(21) Application number: 08115552

(22) Date of filing: 13.04.1996

(71) Applicant: KONOIKE CONSTR LTD

(72) Inventor: SODA ISANARI

KASHIHARA KENICHI

KUROKI YASUO

OTA HIROSHI

KANZAWA HIROAKI

MORI HIROSHIGE

(54) EARTHQUAKE-RESISTING REINFORCING
STRUCTURE AND VISCOELASTIC DAMPER

(57) Abstract:

PROBLEM TO BE SOLVED: To provide earthquake-resisting reinforcing structure effectively absorbing seismic energy with the object of the buildings of medium- and low-rise reinforced concrete construction and a high-rise building mainly and capable of reducing the response of a structure and a compact viscoelastic damper proper to the structure at low cost.

SOLUTION: Reinforcing posts 4 are installed along the columns 1 of column-beam frames. A cylinder type viscoelastic damper 3 is mounted into the column-beam frames in the type of a brace through gusset plates 5, and an input to a structure is reduced by the energy absorption of the viscoelastic damper 3. In the viscoelastic damper 3, an internal cylinder 3b using an end section on the reverse side as a fixing end is inserted into an external cylinder 3a employing one end as a fixing end, and a clearance between the external cylinder 3a and the internal cylinder 3b is filled with a

viscoelastic body 3c. The viscoelastic body 4 uses a high molecular material as a raw material, has the hysteresis characteristics of an elliptic loop and a velocity dependence type damping characteristics, and has the large degree of freedom regarding a shape and is molded easily.

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